Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class Period \_\_\_\_\_\_

Test: Linear Patterns, Expressions, and Functions

1. Study pattern and draw the next step. 2. Describe how the pattern

is growing each step.

Step 1 Step 2 Step 3 Step 4

3. The total number of tiles in the figure depends on the step .

Write an equation for as a function of .

Show work here to test your equation.



4. Complete the table. 5. Complete the graph.

Use the pattern

to find the 0-step.

|  |  |
| --- | --- |
| Step Number | Total Tiles |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
|  | 33 |

Does your graph have the dependent and independent variables in the right place?

Did you choose an appropriate scale?

Is it evenly spaced?

Is the scale clearly numbered?

Is each axis of your graph labeled so the reader knows what it represents?

6. Is this pattern linear? YES NO

Do you connect the points? YES NO

Use a pink highlighter or colored

pencil to show the growth rate

on each representation, (picture,

words, equation, table, graph.)

7. Would the ordered pair

appear on a larger graph

of this pattern? YES NO

Explain how you know?

8. Study the pattern and draw the next step. 9. Describe how the pattern

Is growing each step.

Step 1 Step 2 Step 3 Step 4

10. The total number of circle depends on the step .

Write an equation for as a function of .

Show work here to

test your equation.



Use the pattern

to find 0-step.

11. Complete the table. 12. Complete the graph.

|  |  |
| --- | --- |
| Step Number | Total Circles |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
|  | 25 |

Does your graph

have the dependent and independent variable in the right place?

Did you choose an appropriate scale?

Is it evenly spaced?

Is the scale clearly numbered?

Is each axis of your graph labeled so the reader knows what it represents?

13. Is this pattern linear? YES NO

Do you connect the points? YES NO

Use a pink highlighter or colored

pencil to show the growth rate on

each representation, (picture, words,

equation, table, and graph.)

14. The ordered pair would

appear on a larger graph of this

pattern. Explain what this point

means in this context.